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EXAMINER

KAUFFMAN, BRIAN K

ART UNIT PAPER NUMBER

3765

DATE MAILED: 03/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/796,337	Applicant(s) LUHNOW, JEFFREY	
	Examiner Brian K Kauffman	Art Unit 3765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2004.
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-105 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-22, 25-47, 50-72, 75-97 and 100-105 is/are rejected.
 7) ☒ Claim(s) 23, 24, 48, 49, 73, 74, 98 and 99 is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The subject matter of this application requires illustration by a drawing to facilitate understanding of the invention and its structure. Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-9, 12-16, 18-22, 26-34, 37-41, 43-47, 51-59, 62-66, 68-72, 76-84, 87-91, 93-97, and 101 are rejected under 35 U.S.C. 102(e) as being anticipated by Swab (6,564,118).

In regard to claims 1-2, 4-6, 8, 20, Swab discloses a method for fitting an article to a human being comprising selecting on the basis of body information about the human being, a subset of entries from a database populated with entries, wherein the

entries comprised body dimensions measured for another individual human being and also comprise data from which the article is designed (col. 4, lines 15-46).

In regard to claims 3, 7, 9, 28, 30, 32-34, 53, 55, 57-59, 78, 80, 82-84, Swab discloses using an optical shape sensor that is disclosed in Yoda (5,515,268) and is further disclosed in Grindon (4,846,577). It is disclosed in Grindon that the optical shape sensor is a laser scanner (col. 3, lines 23-26). Swab also discloses that the body information is selected from the group consisting of seat shape, overall body shape, measured waist circumference, and body weight (col. 4, lines 34-36).

In regard to claims 12-14, 22, 37-39, 47, 62-64, 72, 87-89, 97, Swab discloses that each entry in the database comprises canonical data points such as waist size and shoulder widths (col. 4, lines 33-36). Swab discloses using target population standards, which are an average of body dimensions for a set of other human beings (col. 4, lines 41-44). In order to populate the database and determine the standards of the target population, the person must have an extensive knowledge of the population and the data being input into the database and therefore it is inherent that the person populating the database be an expert.

In regard to claims 15, 40, 65, 90, Swab discloses that the set of other human beings comprises human beings with body dimensions falling within a predetermined numerical range (col. 4, lines 55-58).

In regard to claims 16, 41, 66, Swab discloses that the database entries comprise article dimensions for another human being (col. 4, lines 55-58).

In regard to claims 18-19, 43-44, 68-69, 93-94, Swab discloses that the body information about the other individual human beings is within a predetermined neighborhood of body information about the human being, the neighborhood being defined by a range of numerical values (col. 4, lines 47-66).

In regard to claims 21, 46, 71, 96, Swab discloses that the database entries have been mathematically transformed (col. 4, lines 47-58). The data is mathematically transformed by filtering out the data that does not fall within the set of target population body measurements required by the individual.

In regard to claim 26-27, 29, 31, 45, Swab discloses a method for custom fitting an article to a human being comprising obtaining body information about the human being, populating a database with entries comprising data about other individual human beings selected from the group consisting of body dimensions, selecting a subset of entries from the database on the basis of the body information about the human being, and designing an article based on the subset of entries (col. 4, lines 15-67).

In regard to claim 51, the applicant recites "means for obtaining body information about said human being or animal" and "means for selecting subsets of entries from said database on the basis of said body information about said human being or animal", and "means for designing said article on the basis of said subset entries". These are claim limitations, which invoke 35 U.S.C. 112, sixth paragraph. In accordance with MPEP 2183, a prima facie case of equivalence between the means for obtaining body information, means for populating a database, means for selecting subsets of entries,

Art Unit: 3765

and means for designing said article disclosed by the applicant in the specification and the prior art elements 25, 37, and 16 of Swab is made as follows:

Element 25 in Swab performs the function specified in the claim since it obtains body information about said human being or animal. Element 25 in Swab is not excluded by any explicit definition provided in the specification for an equivalent since the definition for a means for obtaining body information about said human being or animal on page 7, lines 2-10 does not exclude the use of conventional devices such as touch pad, keyboard, mouse, or writing pad through the internet. Finally, element 25 in Swab is an equivalent of the means plus function limitation since the prior art element performs the identical function specified in the claim in substantially the same way, and produces substantially the same results as the corresponding elements disclosed in the specification. *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 54 USPQ2d 1308 (Fed. Cir. 2000). In this regard note that prior art element 25 performs the function of obtaining body information by requiring the customer to input body information to the central computer through conventional computer devices (col. 3, lines 46-51). Thus the examiner concludes that the claimed limitation is met by the prior art elements.

Element 37 in Swab performs the function specified in the claim since it selects subsets of entries from the database. Element 37 in Swab is not excluded by any explicit definition provided in the specification for an equivalent since the definition for a means for selecting subsets of entries from said database on the basis of said body information about said human being or animal on page 12, lines 12-13 does not exclude the use of an algorithm. Finally, element 37 in Swab is an equivalent of the means plus

Art Unit: 3765

function limitation since the prior art element performs the identical function specified in the claim in substantially the same way, and produces substantially the same results as the corresponding elements disclosed in the specification. *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 54 USPQ2d 1308 (Fed. Cir. 2000). In this regard note that prior art element 37 performs the function of selecting subsets of entries from the database by comparing and matching a pre-defined set of variables (col. 4, lines 59-66). Thus the examiner concludes that the claimed limitation is met by the prior art elements.

Element 16 in Swab performs the function specified in the claim since it designs the article on the basis of the subset entries. Element 16 in Swab is not excluded by any explicit definition provided in the specification for an equivalent since the definition for a means for designing the article on the basis of the subset entries on page 11, lines 2-5 does not exclude the use of database of body dimension values. Finally, element 16 in Swab is an equivalent of the means plus function limitation since the prior art element performs the identical function specified in the claim in substantially the same way, and produces substantially the same results as the corresponding elements disclosed in the specification. *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 54 USPQ2d 1308 (Fed. Cir. 2000). In this regard note that prior art element 16 performs the function of designing the article on the basis of the subset entries (col. 4, lines 15-66). Thus the examiner concludes that the claimed limitation is met by the prior art elements.

Claim 51 claims a means for populating a database with entries comprising data about other individual human beings or animals selected from a group consisting of

Art Unit: 3765

body dimensions and body information. However, the specification does not disclose any specific structure for the means. Hence, 35 U.S.C. 112 sixth paragraph is not invoked. Swab discloses a means for populating a database with entries comprising data about other individual human beings or animals selected from a group consisting of body dimensions and body information (col. 4, lines 15-45).

In regard to claims 52, 54, 56, Swab discloses the database entries comprise body dimensions measured for another individual human being (col. 4, lines 15-25).

In regard to claim 70, Swab discloses that database entries have been pre-selected from a larger set (col. 4, lines 15-25).

In regard to claims 76-77, 79, 81, 91, 95 Swab discloses a custom fitted article for a human being, wherein the article is designed on the basis of a subset of entries from a database, wherein the database is populated with entries comprising data about other individual human beings or animals selected from the group consisting of body dimensions and body information, and wherein the subset is selected on the basis of body information about the human being (col. 4, lines 15-67).

In regard to claim 101, Swab discloses that the article is selected from the group consisting of a pair of pants, a pair of jeans, a sweater, a skirt, a dress, a shirt, a blouse, a vest, a jacket, a coat, a pair of knickers, a pair of leggings, a jersey, a pair of shorts, a leotard, a pair of underwear, a hat, a cap, and a bathing suit (col. 4, lines 23-25).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 10-11, 17, 25, 35-36, 42, 50, 60-61, 67, 75, 85-86, 92, and 100 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Swab (6,564,118).

In regard to claims 10, 35, 60, 85, Swab does not specifically disclose that the body dimensions are measured by derivation from point clouds of optical full-body scans, however, the applicant discloses in the specifications that deriving body dimensions from point clouds of optical full-body scans is well-known in the art (p. 12, lines 16-180. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Swab's method by deriving body dimensions from point clouds of optical full-body scans since it is well-known in the art:

In regard to claims 11, 36, 61, 86, Swab does not specifically disclose that the database comprise a representative sample of the adult population of the United States

Art Unit: 3765

of America. However, Swab does disclose that the database is populated by a target population that can consist of categories for whom the garment is designed (col. 4, lines 19-22). Since the adult American population is a target consumer group of the clothing industry, populating the database with a representation of the adult population of the United States would create a database designed for the target population. It would have been obvious to one having ordinary skill in the art at the time the invention was made to require Swab's database to include a representative sample of the adult population of the United States in order to create a database designed for the American adult population, which is a target consumer group of the clothing industry.

In regard to claims 17, 42, 67, 92, Swab does not specifically disclose that the subset comprises body information about the other individual human beings that is identical to body information about the human being. However, the purpose of the database of target populations is to match the ideal standard size of a target population to the individual's body size in order for the garment to have an ideal fit since the garment is designed based on the standard sizes of the target population. An identical match in body sizes would result in the garment fitting the individual perfectly.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to require the database to include body information about the other individual human beings that is identical to the body information of the human being in order to obtain a perfect fit for the individual human being.

In regard to claims 25, 50, 75, 100, Swab does not specifically disclose that the subset comprise a single database entry. However, it is never specified how many

Art Unit: 3765

entries are required by the database. It only takes one entry that has similar or identical measurements to the individual in order to accomplish the goal of custom fitting a garment to the individual. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a subset comprised of a single entry since it only takes one entry that has similar or identical measurements to the individual in order to accomplish the goal of custom fitting a garment to the individual.

Claims 102-105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swab (6,564,118) in view of McMakin et al. (6,607,309).

Swab does not disclose that the body dimensions are measured using a radar scanner. McMakin does disclose that the body dimensions are measured using a radar scanner (col. 3, lines 55-67). The radar scanner is able to take accurate body measurements of individuals that are fully clothed. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Swab's apparatus and method by measuring the body dimensions using a radar scanner as taught by McMakin et al. in order to be able to take accurate body measurements of individuals that are fully clothed.

Allowable Subject Matter

Claims 23-24, 48-49, 73-74, and 98-99 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Art Unit: 3765

The claims are allowable because they specifically require iteratively narrowing and expanding the range of the subset.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Onyshevych et al. (6,665,577) discloses automated fit and size predictions for articles. Park et al. (5,768,135) discloses custom apparel manufacturing. Ramsey et al. (6,353,770) discloses the remote production of customized clothing. Surville (5,757,661) discloses a garment grading system.

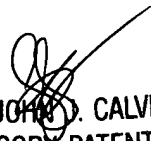
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K Kauffman whose telephone number is (571)272-4988. The examiner can normally be reached on M-F every week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Calvert can be reached on (571)272-4983. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3765

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BKK
3/16/05


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